

AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Currently amended) A reaction disk for an automatic analyzer, comprising:

a reaction disk body which is rotatable about a centrally disposed rotational axis running perpendicular to a horizontally disposed disk expanse; and at least one separation cell and at least one determination cell being respectively arranged along a periphery of the reaction disk body located radially outward of said rotational axis, said at least one separation cell and said at least one determination cell being provided as discrete cell units which are independently separate from one another in a same said reaction disk body, at least a radially outward internal wall of each of said at least one separation cell and said at least one determination cell being maintained in a substantially parallel orientation with respect to said rotational axis even during rotation of said reaction disk body, said at least one separation cell including a structural configuration for preventing a suspension from flowing out during centrifugal separation, supernatant separated by said centrifugal separation from the suspension contained in the separation cell being dispensable to the determination cell to allow analysis of a target substance in the supernatant, the separation cell having an internal structure including a lower portion

that defines an insoluble matter collection zone and an upper portion that defines a supernatant separation zone, a horizontal sectional area of the supernatant separation zone being greater than another horizontal sectional area corresponding to the insoluble matter collection zone such that a shelf is formed at the boundary between the supernatant separation zone and the insoluble matter collection zone.

2. (Previously Presented) The reaction disk according to claim 1, further comprising a single motor, a rotational speed of said single motor being selectable so as to rotate at a first speed for rotating the separation cell for carrying out said centrifugal separation of the suspension into the supernatant and an insoluble matter and at a second speed for rotatably positioning the determination cell at a place where dispensing is performable by a dispensing probe.

3. (Currently amended) The reaction disk according to claim 1, wherein: ~~the separation cell is provided with an insoluble matter collection zone, and~~ said structural configuration for preventing a suspension from flowing out during centrifugal separation comprising a lid at an upper portion of the separation cell above the insoluble matter collection zone to partially cover the separation cell.

4. (Original) The reaction disk according to claim 1, further comprising a dilution cell kept in upright position even during rotation, wherein the dilution cell

is formed to prevent poured dilution solution therein from flowing out during centrifugal separation, and the dilution solution in the dilution cell is arranged to be dispensed to the determination cell enabling to dilute the supernatant.

5. (Original) The reaction disk according to claim 4, wherein the dilution cell is provided with a lid at an upper portion of the dilution cell to partially cover the dilution cell to prevent the dilution solution from flowing out during centrifugal separation.

6. (Original) The reaction disk according to claim 1, wherein the suspension is blood containing blood cell as an insoluble matter, and the supernatant is plasma.

7. (Previously presented) An automatic analyzer for a supernatant, comprising:

the reaction disk according to claim 1;
a dispensing probe for dispensing a reagent to the determination cell of the reaction disk;
a lamp; and
a motor.

8. (Original) The automatic analyzer according to claim 7, wherein the suspension is blood containing blood cell as an insoluble matter, and the supernatant is plasma.

9. (Previously presented) A separation cell for separating an insoluble matter from suspension, comprising:

a cell being disposed in a disk body, said disk body presenting a horizontally disposed disk expanse and being rotatable about a centrally disposed and vertically oriented rotational axis, said cell being disposed radially outward of said rotational axis and having an interior configuration including a lower part thereof defining an insoluble matter collection zone and an upper part thereof defining a supernatant separation zone, a horizontal cross sectional area of said supernatant separation zone being greater than a corresponding cross sectional area of said insoluble matter collection zone thereby creating a shelf at a boundary between said supernatant separation zone and said insoluble matter collection zone; and

a lid being disposed at an upper part of the cell, said lid being positioned to only partially cover the cell so as to leave an opening through which the supernatant is withdrawable from above while preventing the suspension in the cell from flowing out during centrifugal separation, at least a radially outward internal wall of the cell being disposed in a substantially parallel orientation with said rotational axis about

which said separation cell is eccentrically revolvable, said substantially parallel orientation being maintained during said centrifugal separation.

10. (Previously presented) The separation cell according to claim 9, wherein:

said shelf is present at the boundary of said insoluble matter collection zone and said supernatant separation zone extending horizontally from a radially inward side surface of said insoluble matter collection zone towards said rotational center and which continues radially inward to a corresponding radially inward side surface of said supernatant separation zone; and

other respective side surfaces of said insoluble matter collection zone and said supernatant separation zone, which are opposite to said radially inward side surface and said corresponding radially inward side surface, collectively form a straight face in said cell.

11. (Canceled)

12. (Original) The separation cell according to claim 9 or claim 10, wherein the suspension is blood, the insoluble matter is blood cell, and the supernatant is plasma.

13. (Previously Presented) The reaction disk according to claim 1, wherein said structural configuration includes a lid at an upper portion of the separation cell being disposed to only partially cover the separation cell.

14. (Previously presented) The reaction disk according to claim 1, wherein said reaction disk body is rotatably drivable at a speed suitable for separation and at another speed suitable for determination, said speed and said another speed being alternatively selectively applicable.

15. (Previously presented) The reaction disk according to claim 1, wherein:

the reaction disk body is rotated about said rotational axis during centrifugation; and

interior vertical side walls of each of said separation cell and said determination cell are arranged substantially parallel to said rotational axis.

16. (Previously presented) The separation cell according to claim 9 or claim 10, in combination with the disk body.

17. (New) The separation cell according to claim 9, wherein a depth of said cell is greater than a maximum width of said cell.

18. (New) The separation cell according to claim 9, wherein said shelf is formed by a portion of said supernatant separation zone which extends radially inward of the insoluble matter collection zone a shelf at the boundary between the supernatant separation zone and the insoluble matter collection zone.

19. (New) The separation cell according to claim 18, wherein said shelf is comprised of a horizontally extended ledge which is orthogonal to a radially inward vertical wall of said insoluble matter collection zone.

20. (New) The reaction disk according to claim 1, wherein a depth of said at least one separation cell is greater than a maximum width of said at least one separation cell.

21. (New) The reaction disk according to claim 1, wherein said shelf is formed by a portion of said supernatant separation zone which extends radially inward of the insoluble matter collection zone a shelf at the boundary between the supernatant separation zone and the insoluble matter collection zone.

22. (New) The reaction disk according to claim 21, wherein said shelf is comprised of a horizontally extended ledge which is orthogonal to a radially inward vertical wall of said insoluble matter collection zone.

23. (New) A reaction disk for an automatic analyzer, comprising:

a reaction disk body which is rotatable about a centrally disposed rotational axis extending perpendicular to a plane corresponding generally to a horizontally disposed disk expanse;

at least one separation cell and at least one determination cell being respectively arranged along a periphery of the reaction disk body located radially outward of said rotational axis, said at least one separation cell and said at least one determination cell being provided as discrete cell units which are independently separate from one another in a same said reaction disk body, at least a radially outward internal wall of each of said at least one separation cell and said at least one determination cell being maintained in a substantially parallel orientation with respect to said rotational axis when said reaction disk body is at rest and during rotation of said reaction disk body, supernatant separated by said centrifugal separation from the suspension contained in the separation cell being dispensable to the determination cell to allow analysis of a target substance in the supernatant; and

said at least one separation cell having an internal structure defining an insoluble matter collection zone in a lower portion of said at least one separation cell and a supernatant separation zone in an upper portion of said at least one separation cell, a horizontal sectional area of the supernatant separation zone being greater than another horizontal sectional area corresponding to the insoluble matter collection zone and such that a shelf is formed at the boundary between the supernatant

separation zone and the insoluble matter collection zone where a portion of said supernatant separation zone extends radially inward of the insoluble matter collection zone, said shelf being comprised of a horizontally extended ledge which is orthogonal to a radially inward vertical wall of said insoluble matter collection zone, each said at least one separation cell including a lid being positioned to only partially cover each said at least one separation cell, and being disposed at a radially outward position of each said at least one separation cell directly over said sectional area corresponding to the insoluble matter collection zone, so as to leave an opening through which the supernatant is withdrawable from above said portion of said supernatant separation zone which extends radially inward of the insoluble matter collection zone, while concomitantly blocking flow of the suspension outward from said at least one separation cell during centrifugal separation.

24. (New) The reaction disk according to claim 23, wherein a depth of said at least one separation cell is greater than a maximum width of said at least one separation cell.